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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,378	03/24/2004	Noriyuki Tamura	SNY-053	3329
20374 7590 08/28/2009 KUBOVCIK & KUBOVCIK SUITE 1105 1215 SOUTH CLARK STREET ARLINGTON, VA 22202				
EXAMINER				
HODGE, ROBERT W				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
08/28/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/807,378

**Applicant(s)**

TAMURA ET AL.

**Examiner**

ROBERT HODGE

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/13/09 has been entered.

### ***Response to Arguments***

Applicant's arguments, see Remarks, filed 7/13/09, with respect to the rejection(s) of claim(s) 1-16 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 5,998,052.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/31720 with the provided Official English translation hereinafter Fujimoto in view of U.S. Patent No. 5,998,052 hereinafter Yamin.

As per the Official English translation Fujimoto teaches a lithium secondary battery that has a negative electrode having an active material layer of amorphous silicon deposited on a copper current collector through a deposition process and the amorphous silicon is a thin layer and a binder is included in the active material layer (page 6, line 11 – page 8, line 11 and Experiments 1 and 2).

Fujimoto does not teach a method of charging the lithium secondary battery within a range of state of charge (i.e. not fully charging the battery).

Yamin teaches a method of partially charging a lithium ion rechargeable battery such that it is not fully charged (column 5, lines 19-31).

At the time of the invention it would have been obvious to one having ordinary skill in the art to partially charge the battery of Fujimoto as taught by Yamin in order to provide a lithium secondary battery that has a lower self discharge rate and is significantly less hazardous thereby avoiding the possibility of explosion from short circuits from nail penetration and compression. If a technique has been used to improve one device (partially charging a lithium secondary battery), and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (providing a lithium secondary battery that has a lower self discharge rate and is significantly less hazardous thereby avoiding the possibility of explosion from short circuits from nail penetration and compression), using the technique is obvious unless its actual application is beyond his or her skill. See MPEP 2141 (III) Rationale C, KSR v. Teleflex (Supreme Court 2007). It is submitted that by the combination of Fujimoto and Yamin as discussed above that no peak (in any of the ranges recited in the claims)

corresponding to a compound of silicon and lithium will be observed in an X-ray diffraction pattern of the negative electrode during charging using  $\text{CuK}_{\alpha}$ -radiation as the X-ray source since the battery of Fujimoto as modified by Yamin is not being fully charged and therefore the burden is shifted to applicants to prove in the form of **evidence** otherwise.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Robert Hodge/  
Examiner, Art Unit 1795